

CLAIMS

1. An apparatus comprising:
- (A) a focus adjusting system;
 - (B) a driving device which drives said focus adjusting system from one of a state in which a near-distance object is in focus and a state in which a far-distance object is in focus to the other; and
 - (C) a control device which repeatedly performs determination of a focusing state of said focus adjusting system while causing said driving device to drive said focus adjusting system, and, if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of times, restrains said focus adjusting system from being driven in said one direction.
2. An apparatus according to claim 1, wherein said focus adjusting system includes a lens.
3. An apparatus according to claim 1, wherein said driving device includes a motor.
4. An apparatus according to claim 1, wherein, if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches the predetermined number of

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times, said control device inhibits said focus adjusting system from being driven in said one direction.

5. An apparatus according to claim 1, wherein, if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches the predetermined number of times, said control device controls said driving device to drive said focus adjusting system in a direction reverse to said one direction.

6. An apparatus according to claim 1, further comprising:

an image pickup device which receives a light flux taken in through said focus adjusting system,

wherein said control device repeatedly performs determination of a focusing state of said focus adjusting system on the basis of a picked-up image signal from said image pickup device.

7. An apparatus according to claim 1, further comprising:

an image pickup device which receives a light flux taken in through said focus adjusting system,

wherein said control device repeatedly performs determination of a focusing state of said focus adjusting system on the basis of a predetermined high-frequency component of a picked-up image signal from said image

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pickup device.

8. An apparatus according to claim 1, further comprising:

an image pickup device which receives a light flux taken in through said focus adjusting system,
wherein said control device controls said driving device to drive said focus adjusting system in such a direction as to increase a predetermined high-frequency component of a picked-up image signal from said image pickup device.

9. An apparatus according to claim 1, wherein said control device controls said driving device to drive said focus adjusting system in such a direction as to bring said focus adjusting system into an in-focus state.

10. An apparatus according to claim 9, wherein, if said focus adjusting system has been driven within a predetermined range for a predetermined period of time, said control device determines that said focus adjusting system is in an in-focus state.

11. An apparatus according to claim 9, wherein, if said focus adjusting system has been driven within a predetermined range for a predetermined period of time, said control device stops driving of said focus adjusting system by said driving device.

12. An apparatus according to claim 9, wherein, if said focus adjusting system has been driven beyond a predetermined range in a predetermined period of time, said control device controls said driving device to drive said focus adjusting system at a faster speed in a direction in which said focus adjusting system has been driven.

13. An apparatus according to claim 9, wherein said control device has a first driving mode for minutely driving said focus adjusting system and a second driving mode for driving said focus adjusting system at high speed, and, in said first mode, if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches the predetermined number of times, restrains said focus adjusting system from being driven in said one direction.

14. An apparatus according to claim 13, wherein, in said first driving mode, if said focus adjusting system has been driven beyond a predetermined range in a predetermined period of time, said control device controls said driving device to drive said focus adjusting system in said second driving mode in a direction in which said focus adjusting system has been driven.

15. An apparatus according to claim 1, wherein said control device has a first driving mode for minutely driving said focus adjusting system and a second driving mode for driving said focus adjusting system at high speed, and, in said first mode, if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches the predetermined number of times, restrains said focus adjusting system from being driven in said one direction.

16. An apparatus according to claim 15, wherein, in said first driving mode, if said focus adjusting system has been driven beyond a predetermined range in a predetermined period of time, said control device controls said driving device to drive said focus adjusting system in said second driving mode in a direction in which said focus adjusting system has been driven.

17. An apparatus according to claim 1, wherein said apparatus includes an image pickup apparatus.

18. An apparatus according to claim 1, wherein said apparatus includes a camera.

19. An apparatus according to claim 1, wherein said apparatus includes an optical apparatus.

20. An apparatus adapted for a focus adjusting system and a driving device which drives said focus adjusting system from one of a state in which a near-distance object is in focus and a state in which a far-distance object is in focus to the other, said apparatus comprising:

a control device which repeatedly performs determination of a focusing state of said focus adjusting system while causing said driving device to drive said focus adjusting system, and, if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of times, restrains said focus adjusting system from being driven in said one direction.

21. An apparatus according to claim 20, wherein said apparatus includes an image pickup apparatus.

22. An apparatus according to claim 20, wherein said apparatus includes a camera.

23. An apparatus according to claim 20, wherein said apparatus includes an optical apparatus.

24. A focus adjusting method comprising the steps of:

repeatedly performing determination of a

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focusing state of a focus adjusting system while driving said focus adjusting system from one of a state in which a near-distance object is in focus and a state in which a far-distance object is in focus to the other, and, if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of times, restraining said focus adjusting system from being driven in the one direction.

25. A computer program product for focus adjustment, comprising the contents of:

repeatedly performing determination of a focusing state of a focus adjusting system while driving said focus adjusting system from one of a state in which a near-distance object is in focus and a state in which a far-distance object is in focus to the other, and, if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of times, restraining said focus adjusting system from being driven in the one direction.